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09/875,329	06/05/2001	Steven A. Morley	010327	7520

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QUALCOMM INCORPORATED
5775 MOREHOUSE DR.
SAN DIEGO, CA 92121

EXAMINER	
RAO, ANAND SHASHIKANT	
ART UNIT	**PAPER NUMBER**
2621	

NOTIFICATION DATE	DELIVERY MODE
11/26/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

us-docketing@qualcomm.com
kascanla@qualcomm.com
nanm@qualcomm.com

Office Action Summary	Application No.	Applicant(s)	
	09/875,329	MORLEY ET AL.	
	Examiner	Art Unit	
	Andy S. Rao	2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 June 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *2-5,7-10,12-15,17-20,22-25 and 27-30* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *2-5, 7-10, 12-15, 17-20, 22-25, 27-30* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 6/21/07has been entered.

Response to Arguments

2. Applicant's arguments filed with respect to claims 2-5, 7-10, 12-15, 17-20, 22-25, 27-31 (amended) as filed in 6/21/07 have been fully considered but they are not persuasive.

3. The Applicant presents two arguments contending the Examiner's rejection of claims 2-5, 7-10, 12-15, 17-20, 22-25, 27-31 and 33-35 rejected under 35 U.S.C. 103(a) as being unpatentable over Kim et al., (hereinafter referred to as "Kim") in view of Thyagarajan et al., (hereinafter referred to as "Thyagarajan") and Donovan, as was set forth in the final Office Action of 11/30/06, said arguments put forth in support of now amended claims 2-5, 7-10, 12-15, 17-20, 22-25, 27-30, and in particular the "...dividing...into a plurality of frames..." of the amended claims. However after a careful consideration of the arguments presented, the Examiner must respectfully disagree for the reasons that follow, and maintains the applicability of the references as the basis of the grounds of rejection that follows below.

4. Firstly, the Applicants argue that the secondary Thyagarajan reference fails to address the features the currently amended claims 8, 18, and 28, specifically the "dividing the digital image

into a plurality of frames, each frame including..." (Amendment of 6/21/07: page 6, lines 9-29; page 7, lines 1-2) limitation and further clarifies their position providing an interpretation of the dividing function of Thyagarajan (Amendment of 6/21/07: page 7, lines 3-18 and accompanying figure) and contrasting that interpretation with the instant invention as in the currently amended claims (Amendment of 6/21/07: page 8, lines 1-16 and accompanying figure). The Examiner respectfully disagrees. While the implementation of block division is only shown for one frame, it is clear that Thyagarajan is dividing the video signal into a plurality of frames, and implementation the block division on each respective frame. In particular, it is noted that the reference teaches the use of multiple frame memories (Thyagarajan: column 4, lines 40-45) in a intraframe only mode for converting videos from one frame rate to another (Thyagarajan: column 4, lines 50-65: "24 fps for movies versus 30 fps for video), and further compares its efficacy with regards to other frame dividing compression algorithms (Thyagarajan: column 7, lines 30-40: MPEG is GOP based). It is noted that Thyagarajan discloses that this teaching incorporates prior teachings wherein each video signal is divided into a series of frames, wherein each frame is then adaptively divided on a blockwise scale (Thyagarajan: column 1, lines 40-67: references to US Patents: 5,021,891, 5,107,345, 5,452,104 which the primary reference has incorporated by reference). It is also noted that the main teaching of primary reference is to reduce a blocking effect (i.e. an effect accrued over ***multiple frames***), which clearly establishes that the reference addresses "...dividing the digital image into a plurality of frames, each frame including..." as in the claims. Additionally, it is noted that the primary Kim reference addresses this teaching (Kim: column 3, lines 25-35: group of pictures level of a video signal). In response to applicant's arguments against the references individually (Amendment of 6/21/07: page 7,

lines 3-18 and accompanying figure), one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); In re Merck & Co., 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).* Since, the Examiner has shown that Kim meets this limitation, Thyagarajan on its own doesn't have to, as well, although, as discussed above, the Examiner notes that the secondary reference doesn't on its own, also meet this limitation. Furthermore, it is noted that even if the primary Kim and secondary Thyagarajan references had failed to disclose extending the adaptive blocking scheme over a series of frames (i.e. dividing the video stream into a series of frames), the Examiner notes that this features is merely the duplication of a feature for a multiplied effect (i.e. the extension of the adaptive blocking scheme over a series of frames, as opposed to just a singular frame), and further notes that courts have long established this modification as obvious and well within the purview of one of ordinary skill in the art, and therefore, unpatentable, *St. Regis Paper Co. v. Bemis Co., Inc., 193 USPQ 8, 11, (7th Circuit 1977).* Accordingly, the Examiner maintains that the limitation is met.

Lastly, the Applicant's argue that since Donovan discloses filtering on a line-by-line basis, that this fails to read block by block filtering of the claimed invention (Amendment of 6/21/07: page 8, line 17; page 9, lines 1-18). The Examiner respectfully disagrees. Firstly, it is noted that the filtering is applied to multiple lines at the same time (Donovan: column 5, lines 23-45), and pair of lines with the horizontal application of the coefficients (Donovan: column 9, lines 57-63), and thus would be applicable to a multi-line configuration such as a block. Accordingly, the Examiner maintains that since Donovan teaches filtering on a multiple line basis, it is does not teach away from primary and secondary references. Furthermore, since m

and n are never defined as being anywhere in the claims as being greater than zero, a line-by-line application still reads on the claims. The blocks are never stipulated in terms of dimension, either with m and n being equal to each other leading to uniform block sizes, or with m or n being different from each other leading to non-uniform block based partitions. A line reads on the latter case where, each line would be a row (n=1) and the columns being equal in number to the number of pixels in each row. Since a line can be represented in a row-column nomenclature, it reads on the broadly claimed blocks of the instant invention. However, even if the claims were amended to establish dimensions of the blocks to overcome the line application this would still not overcome the application of the Donovan reference as the extension of line-based filtering to a block based application represents nothing more than an obvious duplication of parts to produce a multiplied effect which has already been legal established as being unpatentable, *St. Regis Paper Co. v. Bemis Co., Inc., 193 USPQ 8, 11 (7th Cir. 1977).* Accordingly, the Examiner maintains that Donovan sufficiently addresses the broadly claimed block based filtering.

A detailed rejection follows below.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 2-5, 7-10, 12-15, 17-20, 22-25, 27-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim et al., (hereinafter referred to as "Kim") in view of Thyagarajan et al., (hereinafter referred to as "Thyagarajan") and Donovan.

Regarding independent claim 8, Kim discloses a method of decimation of a digital image, the digital image represented by a plurality of pixels (Kim: figure 3B), the method comprising: dividing the digital image into a plurality of frames (Kim: column 3, lines 25-35: group of pictures), each frame including a plurality of blocks (Kim: column 6, lines 32-65), wherein each block of the plurality of blocks may be represented as a plurality of elements within a plurality of columns and rows, decimating further comprising: filtering each element of each column of the block (Kim: column 12, lines 10-60); and decimating the blocks (Kim: column 12, lines 60-67; column 13, lines 1-10), as in claim 8. However, Kim fails to disclose filtering each element of each column of the block, where given a column, weighting the previous column 25%, the current column 50%, and the next column 25%; and decimating, a subset of the blocks within a certain frame of the plurality of frames based upon predetermined criteria. Thyagarajan discloses the decimation of a subset of blocks within a certain frame of the plurality of frames (Thyagarajan: column 4, lines 25-64: as discussed above) of the digital images based on predetermined criteria (Thyagarajan: column 5, lines 35-67; column 6, lines 1-50) in order to preserve features of blocks by preventing the blocking effect (Thyagarajan: column 4, lines 20-30), as in the claim. Accordingly, given the Thyagarajan teaching, it would have been obvious for one of ordinary skill in the art to incorporate Thyagarajan's teaching of subset decimation of a certain frame of a plurality of frames based on predetermined criteria, into the Kim decimation method in order to prevent blocking artifacts and thus preserve features of blocks. The Kim

method, now incorporating Thyagarajan's teaching of decimating a subset of a plurality of blocks based on predetermined criteria, has a majority of the features of claim 8, but fails to disclose having filtering each element of each column of the block, where given a column, weighting the previous column 25%, the current column 50%, and the next column 25%, as in the claim. Donovan discloses that a filter weighting of current columns of blocks where the 25%-50%-25% configuration is known (Donovan: column 9, lines 30-65: mode of ¼, ½, ¼) in order to allow for scaling (decimation) between different scan line formats (Donovan: column 8, lines 15-32). Accordingly, given this teaching it would have been obvious for one of ordinary skill in the art to incorporate the Donovan teaching of weighing coefficients of ¼, ½, ¼ for a current column of pixels into the Kim-Thyagarajan method, in order to allow the composite method to scale between different scan line formats. The Kim method, now incorporating the Donovan teaching of weighting coefficients of ¼, ½, ¼ and Thyagarajan's teaching of decimating a subset of a plurality of blocks of certain frame of the plurality of frames, has all of the features of claim 8.

Regarding claim 2, the Kim method, now incorporating the Donovan teaching of weighting coefficients of ¼, ½, ¼ and Thyagarajan's teaching of decimating a subset of a plurality of blocks of certain frame of the plurality of frames, has the predetermined criteria is a function of chrominance information of the block (Thyagarajan: column 6, lines 50-55), as in the claim.

Regarding claim 3, the Kim method, now incorporating the Donovan teaching of weighting coefficients of ¼, ½, ¼ and Thyagarajan's teaching of decimating a subset of a

plurality of blocks of certain frame of the plurality of frames, has the predetermined criteria being is a function of contrast of the block (Thyagarajan: column 7, lines 1-15), as in the claim.

Regarding claim 4, the Kim method, now incorporating the Donovan teaching of weighting coefficients of ¼, ½, ¼ and Thyagarajan's teaching of decimating a subset of a plurality of blocks of certain frame of the plurality of frames, has the predetermined criteria being a function of a level of detail in the block (Thyagarajan: column 7, lines 1-15), as in the claim.

Regarding claim 5, the Kim method, now incorporating the Donovan teaching of weighting coefficients of ¼, ½, ¼ and Thyagarajan's teaching of decimating a subset of a plurality of blocks of certain frame of the plurality of frames, has the predetermined criteria being a function of a desired bit rate (Thyagarajan: column 13, lines 55-68), as in the claim.

Regarding claim 7, the Kim method, now incorporating the Donovan teaching of weighting coefficients of ¼, ½, ¼ and Thyagarajan's teaching of decimating a subset of a plurality of blocks of certain frame of the plurality of frames, has separating the image into luminance and two chrominance signals (Kim: column 3, lines 35-40), and decimating further comprises decimating one of the two components for the subset of the plurality of blocks (Thyagarajan: column 5, lines 15-40), as in the claim.

Regarding claim 9, the Kim method, now incorporating the Donovan teaching of weighting coefficients of ¼, ½, ¼ and Thyagarajan's teaching of decimating a subset of a plurality of blocks of certain frame of the plurality of frames, has filtering the elements of the plurality blocks along the rows (Donovan: column 9, lines 30-65: mode of 1/4/,1/2,1/4), as in the claim.

Regarding claims 10, the Kim apparatus, now incorporating the Donovan teaching of weighting coefficients of ¼, ½, ¼ and Thyagarajan's teaching of decimating a subset of a plurality of blocks of certain frame of the plurality of frames, has pixel to frequency and frequency to pixel conversion (Kim: column 3, lines 25-50), as in the claim.

Regarding claim 12, the Kim apparatus, now incorporating the Donovan teaching of weighting coefficients of ¼, ½, ¼ and Thyagarajan's teaching of decimating a subset of a plurality of blocks of certain frame of the plurality of frames, has the predetermined criteria is a function of chrominance information of the block (Thyagarajan: column 6, lines 50-55), as in the claim.

Regarding claim 13, the Kim apparatus, now incorporating the Donovan teaching of weighting coefficients of ¼, ½, ¼ and Thyagarajan's teaching of decimating a subset of a plurality of blocks of certain frame of the plurality of frames, has the predetermined criteria being a function of contrast of the block (Thyagarajan: column 7, lines 1-15), as in the claim.

Regarding claim 14, the Kim apparatus, now incorporating the Donovan teaching of weighting coefficients of ¼, ½, ¼ and Thyagarajan's teaching of decimating a subset of a plurality of blocks of certain frame of the plurality of frames, has the predetermined criteria being a function of a level of detail in the block (Thyagarajan: column 7, lines 1-15), as in the claim.

Regarding claim 15, the Kim apparatus, now incorporating the Donovan teaching of weighting coefficients of ¼, ½, ¼ and Thyagarajan's teaching of decimating a subset of a plurality of blocks of certain frame of the plurality of frames, has the predetermined criteria being a function of a desired bit rate (Thyagarajan: column 13, lines 55-68), as in the claim.

Regarding claim 17, the Kim apparatus, now incorporating the Donovan teaching of weighting coefficients of ¼, ½, ¼ and Thyagarajan's teaching of decimating a subset of a plurality of blocks of certain frame of the plurality of frames, has separating the image into luminance and two chrominance signals (Kim: column 3, lines 35-40), and the means for decimating further comprises decimating one of the two components for the subset of the plurality of blocks (Thyagarajan: column 5, lines 15-40), as in the claim.

Kim discloses an apparatus of decimation of a digital image, the digital image represented by a plurality of pixels (Kim: figure 3B), comprising: means for dividing the digital image into a plurality of frames (Kim: column 3, lines 25-35: group of pictures), each frame including a plurality of blocks (Kim: column 6, lines 32-65), wherein each block of the plurality of blocks may be represented as a plurality of elements within a plurality of columns and rows, decimating further comprising: filtering each element of each column of the block (Kim: column 12, lines 10-60) and decimating the blocks (Kim: column 12, lines 60-67; column 13, lines 1-10), as in claim 18. However, Kim fails to disclose filtering each element of each column of the block, where given a column, weighting the previous column 25%, the current column 50%, and the next column 25%; and decimating, a subset of the blocks within a certain frame of the plurality of frames based upon predetermined criteria. Thyagarajan discloses the decimation of a subset of blocks within a certain frame of the plurality of frames (Thyagarajan: column 4, lines 25-64: as discussed above) of the digital images based on predetermined criteria (Thyagarajan: column 5, lines 35-67; column 6, lines 1-50) in order to preserve features of blocks by preventing the blocking effect (Thyagarajan: column 4, lines 20-30), as in the claim. Accordingly, given the Thyagarajan teaching, it would have been obvious for one of ordinary skill in the art to

incorporate Thyagarajan's teaching of subset decimation of a certain frame of a plurality of frames based on predetermined criteria, into the Kim decimation method in order to prevent blocking artifacts and thus preserve features of blocks. The Kim apparatus, now incorporating Thyagarajan's teaching of decimating a subset of a plurality of blocks based on predetermined criteria, has a majority of the features of claim 18, but fails to disclose having filtering each element of each column of the block, where given a column, weighting the previous column 25%, the current column 50%, and the next column 25%, as in the claim. Donovan discloses that a filter weighting of current columns of blocks where the 25%-50%-25% configuration is known (Donovan: column 9, lines 30-65: mode of ¼, ½, ¼) in order to allow for scaling (decimation) between different scan line formats (Donovan: column 8, lines 15-32). Accordingly, given this teaching it would have been obvious for one of ordinary skill in the art to incorporate the Donovan teaching of weighing coefficients of ¼, ½, ¼ for a current column of pixels into the Kim-Thyagarajan apparatus, in order to allow the composite apparatus to scale between different scan line formats. The Kim apparatus, now incorporating the Donovan teaching of weighting coefficients of ¼, ½, ¼ and Thyagarajan's teaching of decimating a subset of a plurality of blocks of certain frame of the plurality of frames, has all of the features of claim 18.

Regarding claim 19, the Kim apparatus, now incorporating the Donovan teaching of weighting coefficients of ¼, ½, ¼ and Thyagarajan's teaching of decimating a subset of a plurality of blocks of certain frame of the plurality of frames, has filtering the elements of the plurality blocks along the rows (Donovan: column 9, lines 30-65: mode of 1/4/,1/2,1/4), as in the claim.

Regarding claims 20, the Kim apparatus, now incorporating the Donovan teaching of weighting coefficients of ¼, ½, ¼ and Thyagarajan's teaching of decimating a subset of a plurality of blocks of certain frame of the plurality of frames, has pixel to frequency and frequency to pixel conversion (Kim: column 3, lines 25-50), as in the claim.

Regarding claim 22, the Kim apparatus, now incorporating the Donovan teaching of weighting coefficients of ¼, ½, ¼ and Thyagarajan's teaching of decimating a subset of a plurality of blocks of certain frame of the plurality of frames, has the predetermined criteria is a function of chrominance information of the block (Thyagarajan: column 6, lines 50-55), as in the claim.

Regarding claim 23, the Kim apparatus, now incorporating the Donovan teaching of weighting coefficients of ¼, ½, ¼ and Thyagarajan's teaching of decimating a subset of a plurality of blocks of certain frame of the plurality of frames, has the predetermined criteria being a function of contrast of the block (Thyagarajan: column 7, lines 1-15), as in the claim.

Regarding claim 24, the Kim apparatus, now incorporating the Donovan teaching of weighting coefficients of ¼, ½, ¼ and Thyagarajan's teaching of decimating a subset of a plurality of blocks of certain frame of the plurality of frames, has the predetermined criteria being a function of a level of detail in the block (Thyagarajan: column 7, lines 1-15), as in the claim.

Regarding claim 25, the Kim apparatus, now incorporating the Donovan teaching of weighting coefficients of ¼, ½, ¼ and Thyagarajan's teaching of decimating a subset of a plurality of blocks of certain frame of the plurality of frames, has the predetermined criteria being a function of a desired bit rate (Thyagarajan: column 13, lines 55-68), as in the claim.

Regarding claim 27, the Kim apparatus, now incorporating the Donovan teaching of weighting coefficients of ¼, ½, ¼ and Thyagarajan's teaching of decimating a subset of a plurality of blocks of certain frame of the plurality of frames, has separating the image into luminance and two chrominance signals (Kim: column 3, lines 35-40), and the decimator is further configured to decimate one of the two components for the subset of the plurality of blocks (Thyagarajan: column 5, lines 15-40), as in the claim.

Kim discloses an apparatus of decimation of a digital image, the digital image represented by a plurality of pixels (Kim: figure 3B), comprising: a divider configured to divide the digital image into a plurality of frames (Kim: column 3, lines 25-35: group of pictures), each frame including a plurality of blocks (Kim: column 6, lines 32-65), wherein each block of the plurality of blocks may be represented as a plurality of elements within a plurality of columns and rows, a decimator configured to decimate blocks within a certain frame of the plurality of frames (Kim: column 12, lines 10-60), as in claim 28. However, Kim fails to disclose a filter configured to filter each element of each column of the block, where given a column, a weighting element for weighting the previous column 25%, the current column 50%, and the next column 25%; and a decimator configured to decimate, a subset of the blocks within a certain frame of the plurality of frames based upon predetermined criteria. Thyagarajan discloses the decimation of a subset of blocks within a certain frame of the plurality of frames (Thyagarajan: column 4, lines 25-64: as discussed above) of the digital images based on predetermined criteria (Thyagarajan: column 5, lines 35-67; column 6, lines 1-50) in order to preserve features of blocks by preventing the blocking effect (Thyagarajan: column 4, lines 20-30), as in the claim. Accordingly, given the Thyagarajan teaching, it would have been obvious

for one of ordinary skill in the art to incorporate Thyagarajan's teaching of subset decimation of a certain frame of a plurality of frames based on predetermined criteria, into the Kim decimation method in order to prevent blocking artifacts and thus preserve features of blocks. The Kim apparatus, now incorporating Thyagarajan's teaching of decimating a subset of a plurality of blocks based on predetermined criteria, has a majority of the features of claim 18, but fails to disclose having filtering each element of each column of the block, where given a column, weighting the previous column 25%, the current column 50%, and the next column 25%, as in the claim. Donovan discloses that a filter weighting of current columns of blocks where the 25%-50%-25% configuration is known (Donovan: column 9, lines 30-65: mode of ¼, ½, ¼) in order to allow for scaling (decimation) between different scan line formats (Donovan: column 8, lines 15-32). Accordingly, given this teaching it would have been obvious for one of ordinary skill in the art to incorporate the Donovan teaching of weighing coefficients of ¼, ½, ¼ for a current column of pixels into the Kim-Thyagarajan apparatus, in order to allow the composite apparatus to scale between different scan line formats. The Kim apparatus, now incorporating the Donovan teaching of weighting coefficients of ¼, ½, ¼ and Thyagarajan's teaching of decimating a subset of a plurality of blocks of certain frame of the plurality of frames, has all of the features of claim 28.

Regarding claim 29, the Kim apparatus, now incorporating the Donovan teaching of weighting coefficients of ¼, ½, ¼ and Thyagarajan's teaching of decimating a subset of a plurality of blocks of certain frame of the plurality of frames, has filtering the elements of the plurality blocks along the columns (Kim: column 12, lines 8-61), as in the claim.

Regarding claims 30, the Kim apparatus, now incorporating the Donovan teaching of weighting coefficients of ¼, ½, ¼ and Thyagarajan's teaching of decimating a subset of a plurality of blocks of certain frame of the plurality of frames, has pixel to frequency and frequency to pixel conversion (Kim: column 3, lines 25-50), as in the claim.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andy S. Rao whose telephone number is (571)-272-7337. The examiner can normally be reached on Monday-Friday 8 hours.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mehrdad Dastouri can be reached on (571)-272-7418. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

	Andy S. Rao Primary Examiner Art Unit 2621

asr
September 12, 2007